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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,214	07/28/2003	Steven B. Lonnes	2001.079	5456

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EXAMINER

BOMAR, THOMAS S

ART UNIT	PAPER NUMBER
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3672

DATE MAILED: 12/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/628,214

Applicant(s)

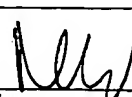
LONNES ET AL.

Examiner

Shane Bomar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/14/03, 10/21/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the command base and wireline of claim 6, and the remote location without wireline support must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The abstract of the disclosure is objected to because of the implied phrase "is disclosed" in line 1. Correction is required. See MPEP § 608.01(b).

*Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 5-10, 13, 14, 17, 19-23, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent 6,125,938 to Garcia-Soule et al.

Regarding claims 1, 17, and 19, Garcia-Soule et al disclose a system of two or more valves wherein said valves operate over a designated pressure interval and are arranged to actuate performance of a sequenced set of events by one or more downhole tools with the application of pressure to said valves (see Figs. 3-4, col. 2, lines 5-65, and col. 9, lines 47-53), and an associated apparatus comprising a combination of two or more valves arranged as sub-assemblies wherein one sub-assembly communicates with another sub-assembly through pressure isolating connections (see Fig. 4 and col. 8, lines 24-38).

Regarding claim 5, the set of events is inherently selected from the currently claimed group of events because Garcia-Soule et al disclose that the valve system is used to operate any known downhole pressure actuated tool (see col. 11, line 64 through col. 12, line 12), wherein at least one event from the currently claimed group is performed by a downhole pressure actuated tool.

Regarding claim 6, said valves operate one or more remote electrical devices that communicate with a command base via a wireline (see col. 3, line 60 through col. 4, line 6).

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Regarding claim 7, said valves operate one or more remote electrical devices that are powered at a remote location without requiring wireline support (see col. 7, lines 38-51 and col. 2, lines 17-23).

Regarding claims 8 and 21, at least one of said valves is adapted to allow fluid to flow therethrough in only one direction (see col. 10, lines 16-19).

Regarding claims 9, 10, 22, and 23, at least one of said valves is adapted to cause fluid flow therethrough to cease when said fluid flow reaches a predefined rate or imposes a predefined pressure upon said valve (see col. 10, lines 9-31).

Regarding claims 13, 14, and 26, one or more orifices are adapted to limit flow of fluid through one or more of said valves to a predefined flowrate (see col. 10, lines 24-31).

Regarding claim 20, wireline communication is provided through said sub-assemblies (see col. 9, lines 1-22).

### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 3, 12, 18, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garcia-Soule et al in view of US patent 6,450,263 to Schwendemann.

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Garcia-Soule et al teach the system and apparatus of two or more valves that operate over a designated pressure interval. It is not expressly taught that one or more of the valves is a cartridge valve, a single purpose cartridge valve, or that a burst disk is present to allow fluid flow out of one or more of the downhole tools.

Schwendemann teaches a valve that operates over a designated pressure interval similar to that of Garcia-Soule et al. It is further taught that the valve is a single purpose cartridge type valve with a burst disk that can be adapted to allow fluid flow out of one or more of the downhole tools (see Fig. 5 and col. 1, lines 32-65). It would have been obvious to one of ordinary skill in the art, having the teachings of Garcia-Soule et al and Schwendemann before him at the time the invention was made, to modify the system of valves taught by Garcia-Soule et al to include the single purpose cartridge type valve of Schwendemann. One would have been motivated to make such a combination since Schwendemann has shown it to be notoriously known in the downhole well tool art to use these types of valves to perform actions at predetermined well pressures.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Garcia-Soule et al.

Garcia-Soule et al teaches the system of two or more valves that operate over a designated pressure interval. It is not explicitly taught that one or more of the valves is an annular-based valve. However, it is taught that annular-based valves are notoriously known in the art (see col. 1, lines 10-17). Therefore, at the time the invention was made, it would have been obvious to one of ordinary skill in the art that at least one of the valves in the system taught by Garcia-Soule et al could have been an annular-based valve without departing from the object of the invention.

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8. Claims 2, 3, 11, 12, 18, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garcia-Soule et al in view of US patent 4,865,127 to Koster.

Garcia-Soule et al teach the system and apparatus of two or more valves that operate over a designated pressure interval. It is not expressly taught that one or more of the valves is a cartridge valve, a single purpose cartridge valve, or that a burst disk is present to allow fluid flow out of one or more of the downhole tools, or that at least one screen is adapted to filter solids having predefined dimensions from fluids before the fluids flow through one or more of the valves.

Koster teaches downhole valves that operate over a designated pressure similar to that of Garcia-Soule et al. It is further taught that the valve is a single purpose cartridge type valve 55 with a burst disk that can be adapted to allow fluid flow out of one or more of the downhole tools, and that at least one screen is adapted to filter solids having predefined dimensions from fluids before the fluids flow through one or more of the valves (see Figs. 4 and 5, and col. 4, lines 19-40). It would have been obvious to one of ordinary skill in the art, having the teachings of Garcia-Soule et al and Koster before him at the time the invention was made, to modify the valve system taught by Garcia-Soule et al to include the single purpose cartridge type valve and filter screen of Koster, in order to obtain a system for deflating a packer after its intended use. One would have been motivated to make such a combination since Koster has shown it to be notoriously known in the art to use single purpose cartridge type valves and filter screens downhole for this purpose.

9. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent 5,704,426 to Rytlewski et al in view of Garcia-Soule et al.

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Regarding claim 15, Rytlewski et al teach a method for perforating and treating multiple intervals of one or more subterranean formations intersected by a wellbore, said method comprising the steps of: (a) deploying a bottom-hole assembly ("BHA") from a tubing string within said wellbore, said BHA having a perforating device 152, 154, or 156, and a sealing mechanism 158; (b) using said perforating device to perforate at least one interval of said one or more subterranean formations; (c) positioning said BHA within said wellbore and activating said sealing mechanism so as to establish a hydraulic seal below said at least one perforated interval; (d) pumping a treating fluid down the annulus between said tubing string and said wellbore and into the perforations created by said perforating device (see col. 1, lines 6-16), without removing said perforating device from said wellbore; (e) releasing said sealing mechanism; and (f) repeating steps (b) through (e) for at least one additional interval of said one or more subterranean formations (see Figs. 14a-14d and col. 11, line 34 through col. 12, line 25). It is not expressly taught that at least one of said steps is actuated by a system of valves that operates over a designated pressure interval and is arranged to actuate performance of said step with the application of pressure to said valves.

Garcia-Soule et al broadly teach a valve system that can be used with most any type of pressure actuated downhole tool, including a perforating tool and sealing mechanism (see col. 2, lines 5-39). It is further taught that the system of valves operates over a designated pressure interval and is arranged to actuate performance of said step with the application of pressure to said valves (see col. 9, lines 47-53). It would have been obvious to one of ordinary skill in the art, having the teachings of Rytlewski et al and Garcia-Soule et al before him at the time the invention was made, to modify the method taught by Rytlewski et al to include the valve system



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of Garcia-Soule et al, in order to obtain a valve system that substantially reduces the number of control lines extending to the earth's surface, as taught by Rytlewski et al in column 11, lines 64-66. One would have been motivated to make such a combination because Rytlewski et al have shown it to be economical and convenient to employ this system downhole for any type of pressure operated tool, wherein it is well known that economics and convenience are important factors for the selection of downhole actuation systems (see col. 1, lines 56-67).

Regarding claim 16, the combination applied to claim 15 above teaches that additional steps are performed including establishing electrical communication through said sealing mechanism (see col. 2, lines 19-21, col. 7, lines 8-32, col. 11, lines 45-48, and Fig. 4 of Garcia-Soule et al).

### *Conclusion*

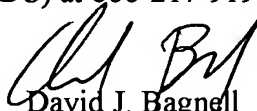
10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Carstensen and Rumbaugh teach other downhole systems of interest.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shane Bomar whose telephone number is 703-305-4849. The examiner can normally be reached on Monday - Thursday from 7:00am to 4:30pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 703-308-2151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
David J. Bagnell  
Supervisory Patent Examiner  
Art Unit 3672

tsb   
December 13, 2004